

The Strategic Dimension in the Structure of the Data Governance Maturity Index

Key to Compliance and Organizational Success

By Dr. Hisham Anani, Senior Consultant

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Summary

The National Data Governance and Maturity Index (NDI) measures how well entities in Saudi Arabia develop their data infrastructure and comply with national data standards. It is structured across 14 domains and two main dimensions: Strategic and Executive.

This report highlights the Strategic Dimension as the key driver that guides entities' data management approach and aligns long-term visions with day-to-day operations. By setting this direction, it enables the Executive Dimension to effectively implement and comply with the required controls and specifications.



The Foundational Role and Strategic-Executive Relationship

The Strategic Dimension in the NDI represents the driving force and defining factor for the overall structure, making it the primary and most influential factor in the index's framework and in the successful achievement of compliance with controls and specifications issued by the National Data Management Office (NDMO).

The Strategic Dimension, with its long-term perspective, is the foundation upon which the Executive Dimension is entirely built. It contributes significantly and heavily to the maturity assessment (with percentages ranging from 20% to 75% across various domains, reaching 60% in Content Management and 57% in Data Modeling). This high proportion confirms that executive performance cannot achieve its tangible results unless it is consistent and guided by the approved strategic visions and directions. Consequently, this integrated relationship ensures that high-level plans are translated into effective daily practices, establishing sustainable compliance with the required national specifications.

Methodology and Defining the Governing Role of Strategy

The analysis of the index's structure and the contribution of the two dimensions relied on official detailed data for the distribution of controls and specifications within the National Index. This distribution is specifically based on the official documents issued by (NDMO, 2021) and (SADIA, 2021), which validates the quantitative basis for analyzing the Strategic Dimension's role as a fundamental guiding factor in the index's structure.

The analysis of the compliance index structure within the NDI shows that the Strategic Dimension is the guiding, governing, and foundational pillar of the index's structure. The definition of its key roles includes:

- **Foundation/Pillar:** It is the essential support element for the entire data management structure; without it, the index cannot be established or its objectives achieved.
- **Guiding:** It defines the direction and priorities, mapping the path for the Executive team to follow towards achieving the long-term vision, preventing arbitrary decisions.
- **Governing:** It sets the oversight framework and high-level controls (Governance Framework), determining "what must be done," "why it must be done," and "how it is measured," ensuring executive activities remain compliant with institutional policies.
- **Foundational:** It is responsible for establishing the initial organizational structure and policies, including founding committees and defining roles responsible for data management.

Structure and Guidance: The Command Relationship

The importance of the Strategic component lies in setting the long-term foundations, plans, and policies that organize the general framework for data management. The relationship between the two dimensions is built on the principle of Structure and Guidance:

- **The Structure:** The Strategic Dimension builds the framework within which the Executive Dimension operates (e.g., establishing a "Data Governance Committee").
- **The Guidance:** It sends directives and tasks to the Executive Dimension, which the Executive must translate into detailed operational procedures.

This relationship represents one of leadership and control: the Strategic Dimension establishes the framework (Structure) and sends the orders (Guidance), which the Executive Dimension must follow to transform them into practical reality.

Causality and Integration

This foundational premise establishes that the relationship between the two dimensions is built on the principle of causality and integration to ensure compliance:

- **Strategic Dimension (The Primary Driver):** It is the primary determinant and controller of the general framework, guaranteeing all efforts align with the institutional vision. Its contribution forms the basis of compliance controls and specifications (40% of controls and 36% of specifications overall). This distribution confirms that the soundness and effectiveness of executive procedures rely entirely on the correctness of the adopted strategic direction, with the Strategic Dimension serving as the prerequisite for success.
- **Executive Dimension (The Operational Weight):** This is the active tool responsible for translating strategies into daily practices and measurable outcomes. Although it carries the largest share of the actual compliance weight (contributing between 60% and 80% in some areas), its implementation efficiency remains contingent upon the guidance provided by the Strategic Dimension.

Ensuring effective integration and collaboration is the crucial key to applying strategic directions efficiently, leading to full compliance with the National Data Index.

Quantitative Analysis of Strategic and Executive Contributions

The quantitative analysis confirms that while effective execution carries the largest weight in achieving actual compliance, this execution is entirely constrained and guided by the strategic foundations, which ensure the integrity of the institutional direction.

Table 1: Overall Contribution of Strategic and Executive Dimensions

Overall Component	Total	Strategic Controls (Guidance)	Executive Controls (Application)	Analysis of Strategic Impact (Governance)
Total Controls	77 Controls	31 Controls (40%)	46 Controls (60%)	The Strategic Dimension represents the cornerstone at 40% , ensuring that 40% of compliance requirements are linked to high-level policies and frameworks.
Total Specifications	191 Specifications	68 Specifications (36%)	123 Specifications (64%)	Strategic specifications form nearly one-third (36%) of the general framework, setting the standards and principles that must be operationally translated.

The analysis of the 14 domains shows that domains with a governance and planning nature (e.g., Modeling and Content Management) rely mainly on strategic direction, while domains with an operational and technical nature (e.g., Integration and Quality) focus on execution.

Table 2: Analysis of the Strategic Dimension's Contribution Across the 14 Data Management Domains

Domain	Controls (Strategic %)	Specifications (Strategic %)	Summary of Strategic Role (Guidance and Control)
1. Data Governance	38% Strategic	25% Strategic	Guiding Reference: Strategy sets the general frameworks and principles for governance, essential for directing long-term regulatory commitment.
2. Metadata and Data Catalog	50% Strategic	35% Strategic	Governance Balance: Equal contribution in controls confirms that metadata creation requires a clear strategic vision before actual documentation.
3. Data Quality	25% Strategic	23% Strategic	Foundational Planning: Execution dominates daily processes (approx. 75%), but Strategy determines target quality levels and long-term policies.
4. Data Storage	40% Strategic	36% Strategic	Sustainability Definition: Strategic impact appears in setting sustainable strategies for infrastructure, with execution ensuring tangible application.
5. Content and Document Management	60% Strategic	50% Strategic	Leading Strategic Role: Strategy is paramount in planning and establishing the content and document management system before operational execution.
6. Data Architecture and Modeling	57% Strategic	69% Strategic	Highest Strategic Focus: Strategy represents the structure and design (long-term vision), the strongest factor, as execution depends entirely on the model's correctness.
7. Reference and Master Data Management	50% Strategic	56% Strategic	Balance Tilted Toward Strategy: Requires strong strategic guidance to set policies/standards, with execution ensuring cross-system alignment.
8. Business Intelligence and Analytics	40% Strategic	60% Strategic	Vision Strategy: Requires concentrated strategic planning (60% in specifications) to define long-term analytical goals and support high-level decision-making.
9. Data Integration and Sharing	25% Strategic	25% Strategic	Coordination Guidance: Requires a strategic vision to guide data sharing and set unified integration strategies, with a greater focus on execution.
10. Achieving Value from Data	25% Strategic	25% Strategic	Asset Building: Requires developing clear plans and strategies to transform data into valuable assets, with execution translating strategies into tangible results.
11. Open Data	40% Strategic	20% Strategic	Transparency Planning: Strategic dimension is essential for setting publishing conditions and transparency plans, the foundation for execution to ensure accessibility.
12. Freedom of Information	50% Strategic	22% Strategic	Framework Leadership: Strategic controls reflect responsibility for setting the general framework and access policies, even if execution dominates practices.
13. Data Classification	20% Strategic	20% Strategic	Framework Leadership: Despite execution dominance (80%), Strategy is responsible for defining the classification framework and governing standards, the prerequisite for any practice.
14. Personal Data Protection	40% Strategic	30% Strategic	Compliance Leadership: Requires setting guided plans and strategies for legal compliance, with execution focused on daily protection practices.

This analysis confirms a causal hierarchy between the two dimensions. In domains requiring planning and structuring (such as Content Management and Modeling), the Strategic Dimension rises to be the leader (over 50%). Conversely, in domains requiring daily operational effort (such as Integration and Quality), the strategic weight decreases, but the strategic direction remains the guarantor that the execution serves long-term objectives (Henderson and Venkatraman, 1993).

Closing

It is evident that the Strategic Dimension in the NDI is the fundamental and most influential pillar in the index's structure. It defines the long-term vision and directions for data management, establishing the governance framework and standards for compliance. This dimension acts as the primary mover and guide, ensuring that the Executive Dimension (concerned with applying policies and controls) is designed and implemented in a manner that serves the institution's higher objectives.

The core importance of the Strategic Dimension lies in ensuring Strategic Alignment between the organization's ambitions and its technical capabilities (Henderson and Venkatraman, 1993). While the Executive Dimension undertakes the task of translating these strategic visions into tangible results and actual compliance, their close integration is essential for achieving sustainable success and proving the institution's commitment to national and international standards.

The overall structure of the index is built on the principle of precise structural integration and balance, confirming it is not a mere collection of controls. The Strategic Dimension acts as a Guidance System, ensuring that the substantial execution efforts are effectively invested to achieve the National Data Vision.

References

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Contact

Kaizen Consulting, P.O. Box 90987, Al Taawun District, Al Taawun Commercial Center,
Riyadh 11623, KSA
Phone: 920004248
Email: info@kaizen.sa

Quick Contacts:

Mobile: 0506261096 (Mr. Suliman)